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Monetary Cooperation in the CFA Zone

Patrick Honohan

Although it has restrained inflation in member countries, the franc zone does not appear to have worked well to channel financial resources to efficient uses.

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This paper — a product of the Financial Policy and Systems Division, Country Economics Department — is part of a larger effort in PRE to explore regional integration in financial systems. Copies are available free from the World Bank, 1818 H Street NW, Washington DC 20433. Please contact Wilai Pitayatonakarn, room N9-003, extension 37666 (18 pages with figures and tables).

In considering the merits of joining a monetary union, small countries naturally value the credible commitment to exchange rate and price stability that membership represents — and that would be hard to sustain by unilaterally pegging one's own currency.

Membership offers other potential advantages. Within a monetary union, capital might flow more freely to where it is most needed. If the distribution of union benefits is reasonable, this could benefit all members — even those who because of low capital productivity became net lenders within the union.

Moreover, the operation of monetary policy and the prudential supervision of the banking system might be more effective if the resources of several small countries were pooled in a strong and independent Central Bank.

Have these advantages been realized in the CFA zone?

Unfortunately, the experience has not been encouraging. Despite the fixed exchange rate and an elaborate set of rules for avoiding overexpansion of credit, the CFA zone has almost foundered in widespread bank insolvency.

The zone's institutional set-up seems equitable, but in practice the burden of paying for losses is likely to fall disproportionately on the poorer countries — whereas most of the nonperforming credits have been made in some of the zone's more prosperous countries.

Produced at the PRE Dissemination Center

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This paper has benefitted from useful discussions with P. Berlin, G. Caprio, M. Dailami, P. Dhonte, A. Gelb, L. Goreux, M. Long, R. Tenconi, D. Vittas and M. Wormser.

MONETARY COOPERATION IN THE CFA ZONE

1 Introduction and summary.

There has been considerable discussion over the past few years on the merits for small countries of joining a monetary union. For the developing world, this debate has centered on the experience of the CFA or franc zone in Africa. This zone is the largest and most enduring of currency blocs. Most of the recent policy discussion on the CFA zone has focussed on three types of question: competitiveness, the mechanics of bank restructuring and the comparative growth performance of CFA versus non-CFA countries[1]. The focus of this paper is rather different. It is designed as a guide to understanding how the zone works as a mechanism for monetary cooperation.

When considering the merits of joining a monetary union small countries naturally value the credible commitment to exchange rate and price stability which membership represents and which would be hard to sustain through unilaterally pegging one's currency[2]. There is also a potential saving through pooling of the external reserves of member currencies.

But there might also be other advantages. Capital might flow more freely to where it was most needed within a monetary union. Provided the distribution of benefits of the union was reasonable, this could be to the advantage of all members, even those whose low capital productivity resulted in their becoming net lenders within the union. Furthermore the operation of monetary policy and the prudential supervision of the banking system might be more effective if the resources of several small countries were pooled in a strong and independent central bank.

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1 See, for example, the references by Devarajan and de Melo (1987a and b), Dittus (1987), Guillaumont & Guillaumont (1984 and 1988), Krumm (1985 and 1987), Ouattara (1986).

2 By embodying the exchange rate decision in a multi-country institutional set-up involving a joint central bank, each member country commits itself to an arrangement from which would be rather costly to exit. This pre-commitment enhances the credibility of the fixed exchange rate arrangement for each member. Pressures on any one member to adjust the exchange rate will be more easily resisted by the authorities because of the sunk costs of union membership. The credibility of the exchange rate commitment could then lead to a more stable monetary and inflation evolution. A companion paper (Honohan, 1990) provides evidence that franc zone inflation has been largely determined by French inflation.

This paper examines whether such additional advantages have been realized in the CFA zone. Unfortunately, the experience which is described in this paper is not an encouraging one. Despite the fixed exchange rate and an elaborate set of rules for avoiding excessive credit expansion, the CFA zone has almost foundered in widespread bank insolvency. Although the zone's institutional set-up seems equitable, in practice the burden of paying for the losses involved is likely to fall disproportionately on the poorer countries, while many of the non-performing credits have been made in some of the more prosperous countries of the zone.

The paper is organized as follows. Section 2 describes the member countries of the zone and points out in particular the diversity not only in their economic structure but in the state of the financial system. Some countries are net borrowers within the zone, some net lenders. This might suggest that some efficient mechanism is in place to channel investable resources to where they are most needed, but this is not the case. Section 3 shows that there is no effective regional money market and considers how this might be remedied. In the absence of a market to determine the regional distribution of credit, this must be done administratively. Section 4 discusses how credit has been distributed between the member countries and highlights the asymmetries which have arisen. While temporary fluctuations in export receipts have influenced part of the distribution, the bulk of available credit has not been used as a revolving fund to meet such temporary needs, but has increasingly gone to a few favored countries. Again this cannot be explained as a flow to where funds are best rewarded, as much of the credit has gone to banks which have subsequently failed. The costs of these bad debts affects the distribution of the seignorage benefits of the zone; section 5 explains how seignorage is divided in the unions and shows how the losses may fall disproportionately on non-favored countries. Section 6 concludes by considering how the recent banking crisis has revealed the deficiencies in the zone's arrangements.

2 The CFA countries

The CFA zone is made up of two separate unions, the West African Monetary Union (UMOA) and the countries which have formed the Bank of the Central African States (BEAC)[3]. Though not all of the former French colonies in sub-Saharan Africa (SSA) joined one or other of the two unions, and though

3 While much of what is said in this paper applies to the whole CFA zone, some of the evidence provided is based only on experience in UMOA.

there have been defections[4] the current situation is that thirteen countries with a total population of some seventy million share just two central banks and two currencies. The currencies, each of which is known as the CFA franc, are both valued at one-fiftieth of the French franc, a peg they have retained for forty years. Along with the fixed exchange rate, the members of the CFA zone have traditionally retained an open international capital market, with statutory freedom of capital movements among the member countries and with France.

The monetary mechanism in the two zones has been characterized by

- an annual monetary programming exercise which determines the planned growth in domestic credit in each member country.

- implementation of this monetary program through credit ceilings to each government and, in some cases, to the private sector, or through ceilings on central bank refinancing of private sector credit.

- administered interest rates, including preferential rates for priority sectors.

The total land area of the CFA zone amounts to 31% of SSA, though its population is only 16% and its total GNP about 22% of that in SSA. The members include some of the poorest countries in the world (chief economic indicators for the members are shown in Table 1). All of them rely heavily on exports of a variety of primary products for the foreign earnings needed for imports of necessities. Most are also heavily dependent on official transfers and concessional lending[5].

It is striking how varied the CFA countries are. Some are open to the sea, some are landlocked. In terms of surface area, each of the largest countries (Chad, Niger and Mali) is almost fifty times the size of the smallest, Equatorial Guinea. The density of population in Togo is almost fourteen times that in Chad. Per capita income in oil-rich Gabon is estimated at

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4 Guinea (Conakry) abandoned the French franc on independence; Mauritania and Madagascar stayed with the French franc until 1973, though neither joined a union. Mali left the Franc zone after independence, only to rejoin it in 1967, and to become a member of the UMOA in 1984. Togo was not a founder member of UMOA either, but joined after a change of government in 1963. In 1985 Equatorial Guinea became both the smallest member of the CFA zone and the first member not to have been a former French colony. Monaco and the Comoros Islands are the remaining non-CFA members of the franc zone apart from France and its dependencies.

5 Official development assistance to the eight poorest members averaged over 12 per cent of GNP in 1987.

TABLE 1: CFA ZONE - GENERAL INDICATORS

UMOA	BENIN	BURKINA FASO	COTE D'IVOIRE	MALI	NIGER	SENEGAL	TOGO	UMOA
Population (Mill. mid-1986)	4.2	8.1	10.7	7.6	6.6	6.8	3.1	47
Area ('000s sq.km.)	113	274	323	1240	1267	196	57	3470
GDP (1986 - mill.$)	1320	930	7320	1650	2080	3740	980	18020
GNP per capita (1986) - dollars	270	150	730	180	260	420	250	358
GNP per capita growth ('65-'86)	0.2	1.3	1.2	1.1	-2.2	-0.6	0.2	0
GDP growth ('65-'80)	2.3	3.5	6.8	4.1	0.3	2.1	4.5	4
GDP growth ('80-'86)	3.6	2.5	-0.3	0.4	-2.6	3.2	-1.1	1
Avg inflation ('65-'80)	7.4	6.2	9.3	...	7.5	6.5	6.9	8
Avg inflation ('80-'86)	8.6	6.3	8.3	7.4	6.6	9.5	6.7	8
Life expectancy ('86) - years	50	47	52	47	44	47	53	49
M2/GDP ('65)	10.6	9.3	21.8	...	3.8	15.3	10.9	16
M2/GDP ('85)	22.8	22.1	29.4	23	15.9	24.5	45.3	26

BEAC	CAR	CHAD	CAMEROON	CONGO	GABON	BEAC	SUB-SAHARAN AFRICA
Population (Mill. mid-1986)	2.7	5.1	10.5	2	1	21	424
Area ('000s sq.km.)	623	1284	475	342	268	2992	20895
GDP (1986 - mill.$)	900	....	11280	2000	3190	17370	165990
GNP per capita (1986) - dollars	290	...	910	990	3080	950	370
GNP per capita growth ('65-'86)	-0.6	...	3.9	3.6	1.9	3	1
GDP growth ('65-'80)	2.6	0.1	5.1	5.9	9.5	5	6
GDP growth ('80-'86)	1.1	...	8.2	5.1	1.5	6	0
Avg inflation ('65-'80)	8.5	6.3	9	7.1	12.7	9	13
Avg inflation ('80-'86)	11.5	...	11	7.5	4.8	9	16
Life expectancy ('86) - years	50	45	55	53	52	55	50
M2/GDP ('65)	13.5	9.3	12.5	16.5	16.2	14	.
M2/GDP ('85)	17.4	25.5	19.4	20.1	26.3	21	.

fifteen times the figure for Burkina Faso. Only in regard to population size and inflation rates does the range of CFA experience fail to encompass the sub-Saharan Africa average (Table 2)[6]. Even here, there is a wide divergence within the CFA zone with individual country populations from less than a half a million to over 11 million; and, though long-term inflation trends converge around the French norm (see Honohan, 1990), cumulative 1980-86 inflation varied between 32% and 92%.

Exports of CFA countries are overwhelmingly (over 90 per cent in each of the countries) composed of primary products or of lightly processed primary products such as vegetable oils, cotton fabrics, wooden veneers and fertilizers. However, it is significant that different countries depend on different product mixes. For example, for the seven countries of the UMOA, a listing of the products which directly or indirectly account for at least five per cent of exports (to industrial countries) involves fourteen quite distinct products (Table 3).

Since the member countries of both unions (but especially the UMOA) depend on different products for the bulk of their exports, and since the prices of these commodities are not very closely correlated[7], there is substantial scope for pooling the risks of fluctuations in export markets.

Reflecting the wide differences in level of development, the range and number of financial institutions varies from country to country within the zone. The dominant financial institutions are banks; the non-bank financial sector is negligible. Most of the largest commercial banks are at least partly government-owned, often with key management and systems provided by French banks which are minority shareholders. There are also large government-owned development banks, some of which accept deposits. As has already been mentioned and is further discussed below, banks in most of the countries have been found to be insolvent. This applies to a substantial fraction of the banking system in Cameroon, Cote d'Ivoire, Senegal, Benin and Chad.

The monetary structure of the UMOA countries also displays wide variations from country to country. As shown in Table 6, many of the CFA banking systems are heavily indebted to the central banks. The average indebtedness of the commercial banks to the central bank throughout the zone in recent years has been about one-third of their non-government lending. There are

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6 And even for inflation the median of SSA countries is within the CFA range.

7 Table 4 shows that the variability of each UMOA country's typical export basket has not been strongly correlated across the countries in the 1980s.

Table 2: The CFA Countries in Sub-Saharan Africa

	SSA Average	CFA lo	CFA hi
Population density (pop/km2)	20	4	36
Population (million)	12	<1	11
Area (km2)	597	28	1284
Inflation average 1980-86 %	16	5	12
Life expectancy at birth (yrs)	50	44	58
Growth avg 1980-86 %	0	-3	8
% Shr in GDP: Agriculture	36	10	50
Industry	25	13	54
Savings (GDS)	11	7	30
Investors	14	9	37
Export share	19	14	47
Govt. cons.	13	9	26
Primary prods as % exports	57	21	96
% of mfg exports to ind. cntrs	34	11	82
Persons per physician	25	3	56
Sch enrlmnt: Primary 5	75	23	>100
Secondary %	23	5	25
Agric. share in workforce %	75	62	87
Urbanization %	25	8	4
Infant mortality (per 000)	113	75	144

Source: World Development Report 1988; Data refers to 1986 or a recent year

Table 3: UMOA: COMMODITY COMPOSITION OF EXPORTS

Country:	Benin	Burkina Faso	Cote d'Ivoire	Mali	Niger	Senegal	Togo
Product:							
Cotton	21	35		68			5
Coffee	7		25				40
Cocoa	16		36				14
Uranium	5				97		
Phosphates						16	45
Fruit and Veg		7	7				
Groundnuts						44	
Karite Almonds		36					
Petroleum	35						
Fish						28	
Wood			15				
Gold				14			
Hides		7					

Note: Table shows percentage of each country's exports to industrial countries of various commodities and products manufactured from those commodities
Only commodities accounting for more than 5% of total exports are included.

Table 4: UMOA: VARIABILITY OF EXPORT PRICES

This panel shows the world price of each country's average basket of commodity exports

	Benin	Burkina Faso	Cote d'Ivoire	Mali	Senegal	Togo	Average
1980	100	100	100	100	100	100	100
1981	97	82	81	86	110	93	86
1982	93	78	76	72	69	84	76
1983	92	87	86	82	86	81	85
1984	94	96	93	80	100	87	93
1985	87	91	89	69	85	79	86
1986	62	100	94	64	65	85	86
1987	69	84	77	77	65	71	75
1988	58	81	70	71	85	72	72
Variance	227	63	88	104	234	77	72

This panel shows the matrix of correlations

	Burkina Faso	Cote d'Ivoire	Mali	Senegal	Togo
Benin	0.067	0.415	0.667	0.625	0.711
Burkina Faso		0.927	0.206	0.130	0.474
Cote d'Ivoire			0.385	0.292	0.693
Mali				0.679	0.681
Senegal					0.608

TABLE 5: MATRIX OF TRADE PATTERNS OF CFA COUNTRIES

EXPORTS (% of total exports of the country at head of column)

	BEN	HVO	CIV	MLI	NER	SEN	TGO	CAM	CAR	TCH	CGO	GAB	Total CFA	FRA
BEN	0.0	0.0	0.0	0.1	1.1	0.0	0.1	0.0	0.0	0.0	0.1	0.0	0.1	0.0
HVO	0.1	0.0	0.1	0.1	0.3	0.0	0.2	0.0	0.0	0.0	0.0	0.0	0.1	0.0
CIV	3.3	28.9	0.0	23.3	9.6	4.2	5.4	1.1	0.0	0.0	0.0	1.4	4.2	0.4
MLI	0.0	0.4	0.2	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0
NER	0.6	0.6	0.1	0.2	0.0	0.0	0.1	0.0	0.0	0.1	0.0	0.0	0.1	0.2
SEN	0.9	1.2	1.6	6.4	0.8	0.0	0.9	0.9	0.2	0.2	0.8	0.2	1.1	0.1
TGO	0.1	0.3	0.0	0.1	0.6	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.1	0.0
CAM	0.0	0.0	2.8	0.0	0.0	0.0	0.0	0.0	0.0	19.5	0.0	0.8	1.0	0.4
CAR	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.0	0.0	0.0
TCH	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.0	0.0	0.1	0.0	0.1	0.0
CGO	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.9	0.0	0.0	0.0	0.1
GAB	0.0	0.0	1.4	0.0	0.0	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.4
CFA	4.9	31.5	6.3	30.2	12.5	4.7	6.6	2.4	0.3	21.0	1.0	2.4	0.0	1.7
FRA	21.6	34.3	35.3	29.3	39.3	34.9	27.5	43.0	59.3	38.0	53.4	55.0	38.7	
CFA+FR	26.4	65.7	41.6	59.5	51.9	39.6	34.2	45.4	59.6	59.0	54.4	57.4	45.9	
World	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

IMPORTS (% of total imports of the country at head of column)

	BEN	BurkiCote HVO	CIV	MLI	NER	SEN	TGO	CAM	CAR	TCH	CGO	GAB	Total CFA	FRA
BEN	0.0	0.3	0.7	0.0	0.3	0.9	0.2	0.0	0.0	0.0	0.0	0.0	0.3	0.1
HVO	0.1	0.0	4.3	1.2	0.7	0.8	2.0	0.0	0.0	0.0	0.0	0.0	1.3	0.1
CIV	0.3	1.8	0.0	3.6	0.6	5.7	0.0	2.3	0.0	0.0	0.0	1.6	1.3	0.5
MLI	0.2	0.3	4.2	0.0	0.2	5.1	0.2	0.0	0.0	0.0	0.0	0.0	1.5	0.1
NER	1.5	0.8	1.2	1.3	0.0	0.4	0.7	0.0	0.0	0.0	0.0	0.0	0.4	0.1
SEN	0.0	0.0	1.8	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.6	0.3
TGO	0.2	0.5	0.3	0.1	0.1	0.7	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1
CAM	0.0	0.0	0.8	0.0	0.0	2.7	0.0	0.0	0.0	10.6	0.0	0.1	0.5	0.6
CAR	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.1
TCH	0.0	0.0	0.0	0.0	0.0	0.1	0.1	1.2	0.3	0.0	0.1	0.0	0.3	0.0
CGO	0.2	0.0	0.1	0.0	0.1	1.0	0.1	0.0	0.0	0.5	0.0	0.0	0.1	0.2
GAB	0.0	0.0	0.5	0.0	0.0	0.0	0.0	0.3	0.0	0.0	0.0	0.0	0.2	0.4
CFA	2.6	3.8	13.9	6.4	2.0	17.7	3.5	1.9	0.3	11.2	0.1	2.0	0.0	2.5
FRA	10.8	38.1	24.9	14.1	88.0	34.8	17.0	26.4	18.1	12.6	12.8	35.9	28.0	0.0
CFA+FR	13.4	42.0	38.8	20.5	90.0	52.5	20.4	30.3	18.3	23.8	12.9	37.9	28.0	2.5
World	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Table 6

TABLE: CFA COUNTRIES MONETARY SURVEY

End-1987
In billions of CFA francs

	Net External Assets	Domestic Credit	Money (M2)	Currency	Claims of Central Bank on Commercial Banks
Benin	-55	106	97	20	49
Burkina Faso	68	68	127	44	8
Cote d'Ivoire	-378	1363	930	305	511
Mali	-43	189	130	61	32
Niger	19	104	114	36	30
Senegal	-206	539	332	101	156
Togo	65	97	164	48	5
UMOA	-530	2466	1894	615	780
Cameroon	-150	939	678	171	342
Cent. Afr. Rep.	18	48	60	41	13
Chad	9	78	76	47	39
Congo	-32	219	138	55	42
Equatorial Guinea	-4	11.3	9.4	7	4
Gabon	-33	384	238	49	29
BEAC	-192	1679	1199	370	467

just two countries (Togo and Burkina Faso) at the other extreme, with the commercial banks accepting deposits so far in excess of what they can usefully lend that they place substantial deposits with the regional central bank. But in most of the countries, and especially in Cote d'Ivoire, Senegal and recently Cameroon, lending by the commercial banks far outstrips deposit resources, with the shortfall being made up through refinancing by the central bank. In all of the countries, direct lending by the banks to government is small.

The central bank in each of the two unions thus provides an intermediation function between the financial systems of the surplus and deficit countries. One way of looking at this is to observe that, while the central banks' total net claims on commercial banks is of the same order of magnitude as the total currency issue, three countries in UMOA and one in BEAC have commercial banking systems indebted to the central bank in an amount in excess of the national currency holdings. In effect, some of the resources mobilized through currency issue in the other countries are being channeled to the banking systems in the other four countries. (The central banks also lend to the government, their overall intermediation role is discussed further below).

3 An union-wide money market?

In a single country the financial system is relied upon to intermediate financial flows from surplus to deficit entities. Bank and non-bank financial intermediaries and securities markets are the means by which savings flows reach those who need to borrow in order to invest in real resources or in order to meet a temporary excess of consumption needs over income. This is not always done with perfect efficiency. Various market and institutional obstacles stand in the way. For example informational asymmetries and the incentive for abuses mean that savers do not have perfect confidence in those who wish to use their funds. Standard financial contracts (such as the debt contract) do not always divide the risks between lender and borrower in an ideal manner; contracts which might be better from that point of view can prove to be unenforceable. All this is common to all countries. The challenge for the monetary union is to attempt to ensure that financial intermediation works as smoothly across international frontiers within the zone as it works within each member country.

National frontiers could create several types of obstacle to financial intermediation, including controls on foreign exchange movements, risk of changes in foreign exchange rates, lack of knowledge about counterparties associated with language differences and limited trading relations[8]. Some of these problems are well dealt with by the CFA unions, but some are not and the net result is that no effective union-wide regional financial market exists.

Where the CFA unions do function reasonably well is in the area of exchange controls and foreign exchange risk, though even here there are problems. In particular it has not always been as easy in practice to transfer funds from CFA countries to France in recent years as it has been in theory[9]. Transfers of funds between the CFA countries are much freer especially since there are only two currencies involved: transfers between two countries of the UMOA involve no foreign exchange transaction; likewise between two BEAC zone countries; nevertheless, there is always the residual risk that a member country might, at a later date, impose restrictions on foreigners attempting to repatriate funds. The fixed exchange rate reduces but does not eliminate the risk of foreign exchange losses: balance of payments difficulties have,

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8 Note, however that the reliability of official statistics which indicate a rather low level of intra-regional trade (Table 5) have been questioned by Yeats (1989b). In line with some studies of colonial relationships (cf. Austen (1987)), the substantial trade with France has prompted some to suggest that the existence of the zone provides extensive benefits to France. A recent study on these lines is Yeats (1989a).

9 There are some limitations which mean that capital is not fully free to flow to France.

First, transfers are increasingly being delayed or even (in some countries) refused except where the bank can provide the funds abroad itself. This is probably the most important limitation.

Second, banks are not permitted to hold more than working balances outside their own country. In some cases this has been stretched to imply that banks must always use to the full all foreign lines of credit available to them.

Third, insurance companies are only allowed a very restricted range of investment possibilities outside their own country.

Fourth, a transfer fee of 0.5% has been payable to the BCEAO on all transfers (for current or capital payments) made to France. This hardly discourages flows of a long-term character, and is said to be bypassed by many banks wherever possible.

Fifth, export receipts must be repatriated to the exporters' country. (This serves to block one possible way of avoiding the transfer fee).

Sixth, there have been requirements to declare export of CFA currency notes; these however are largely ineffective as the currency notes have been freely acceptable in Europe.

from time to time, generated market fears of a change in the parity. For capital between UMOA or BEAC countries those risks are smaller: after all, one is dealing with a single currency and the scenarios under which repatriation of the funds to another African country within the union could entail an exchange loss are more remote.

Cotonou in Benin is about 2,500 km from Dakar in Senegal. This figure, together with the fact that the UMOA is larger than India, gives some idea of the geographical scale of the unions we are concerned about. Over such large scales the information flows necessary to build sufficient confidence to allow borrowing and lending to take place efficiently require the use of trusted intermediaries. In the present stage of development of CFA financial markets this means that savings flows must be intermediated by the banking system. Thus a saver in Dakar may trust his local banker; a bank in Cotonou may have a creditworthy client. Unfortunately, international loans within the unions, even between banks, are virtually unknown. (Even within a single member country as developed as Senegal or Cote d'Ivoire the interbank market is very thin and confined to the leading banks only[10].) Accordingly, it is unlikely, in the posited situation, that the Dakar funds will find their way to the borrower in Cotonou.

The BCEAO does operate what is known as the "Marche Monetaire", but this is little more than the combination of a deposit facility for banks, and a facility for secured borrowing by banks from it and at its discretion. Thus, if a bank in Benin for example, has a demand for liquid funds it may not be able to meet this demand from the marche monetaire even if it is able to provide adequate security, and even if a bank in Senegal, for example, has just placed surplus funds with the marche monetaire.

The BCEAO has not attempted to adjust interest rates to clear the domestic market for bank liquidity[11]. Furthermore, the gap between borrowing and deposit rates in the marche has been as wide as one per cent per annum - far higher than interbank spreads in a developed money market.

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10 The main reason for this has been the uncertain solvency condition of several banks and the strained liquidity position. In recent months even some of the largest banks in Cote d'Ivoire have found themselves unable to meet their obligations on the due date, a development which has encouraged several banks to withdraw altogether from interbank lending.

11 For example, during a very tight period for the Ivorian banks in January 1988, the marche monetaire interest rates were actually lowered in line with interest rate movements in Paris, despite the persistence of excess demand for loans from the marche monetaire.

The situation in the BEAC zone is no better; there is no "marche monetaire", though the BEAC does accept deposits and makes loans. Once again the loans are quite discretionary and depend on policy considerations other than pure banking prudence. The interest rates on loans bear no relation to market-clearing rates.

In short, it has to be said that there is no effective regional money market in the CFA zone. Under the present circumstances, the easiest way to encourage the development of one would be for the central banks to act as intermediaries matching the needs of sound deficit banks with the supply from surplus banks. In view of the fragile state of the banking system it is more than unlikely that any private intermediary would undertake this activity. After all, three large French banks have affiliates in most of the CFA countries, yet they do not undertake interbank transactions even between affiliates in different countries. Only the central bank has sufficient information to judge the soundness of participant banks. But each central bank must also manage monetary policy, and this is also done by means of influencing the quantities of bank liquidity in the different countries. An institutional framework for resolving such conflicts would need to be devised.

For example, in order to ensure a separation of the functions of monetary control and international intermediation, one arm of the central bank (call it the "monetary policy arm") would, as at present, be charged with planning the available amount of central bank credit for the union as a whole. Another arm (the "intermediation arm") would match supply of and demand for bank liquidity on the basis meeting any demands from sound banks presenting acceptable paper as security. The intermediation arm would accept deposits and would also borrow from the monetary policy arm. The latter would adjust the interest rate on its loans to ensure that the market cleared, i.e. that the intermediation arm was not borrowing more than the planned ceiling. Having a market-clearing interest rate is the key to satisfactory operation of international intermediation within the union. Sound banks will not

over-borrow if the interest rate is not subsidized[12].

To summarize, the international flow of funds within the UMOA and BEAC unions is not supported by an adequate institutional infrastructure. The prevailing risks are too great for private markets to perform this function given the information at their disposal. The central banks of each union are better positioned to channel funds from surplus to deficit countries. At present they do this without explicit reference to market criteria; they should move to a market-based system of allocating bank liquidity throughout their respective zones, while preserving monetary control.

4 Monetary policy.

Ideally, the available credit in the union should go to where it yields the highest return. This would presumably involve flows to support domestic expenditure in member countries faced with a transitory balance of payments difficulties resulting from adverse export shocks. On a longer term basis, there should also be a tendency for members where the marginal product of capital was low to be net lenders towards those where the marginal product of capital was high. In this section the process of credit allocation is reviewed to assess whether it flows in accordance with these criteria.

In order to protect the external position of the union, and ultimately to ensure the sustainability of the fixed parity, the monetary authorities avoid creating too much domestic credit. In practice, there is an annual credit planning exercise for each country separately, with the individual plans being simply added together to obtain the monetary plan for each union. The modelling underlying the plan is based on a simple standard fixed exchange rate quantity theory framework. Credit creation in excess of the increase in money demand will spill over into the balance of payments and deplete the

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12 There is a long-standing debate over the appropriate relationship between CFA interest rates and those in Paris. As discussed in Honohan (1990) the policy-determined CFA rates have tended to track Paris rates, as would be the normal market tendency considering the fixed exchange rate and the relatively open capital market. However, because of the residual risks perceived by foreign banks, capital will not always flow in plentifully in response to a small interest differential. Higher interest rates may sometimes be necessary to allow the market to choose between competing uses for the limited funds available within the union.

union's reserves. Therefore the credit plan is in principle designed to limit such excesses, both for individual countries and for the union as a whole[13].

Broadly speaking, an expansion in central bank refinancing of bank credit leads to an expansion in overall bank credit, franc for franc. Although the money stock responds to such an increase at first, there is no sustained increase in money demand: over time the credit expansion leaks out into the balance of payments[14].

Because there are no private banking flows between member countries, central bank refinancing in one country will result in an increase in bank credit in that country, and not in the other countries. This allows the central bank to pursue independent credit objectives for each member country, as is often required by IMF programs. (If a true international money market were established in the unions then union-wide liquidity might have to be adjusted in response to an emergent overshoot of the credit ceiling in one country[15]).

Among the factors apparently influencing the allocation of central bank credit between countries, at least in the short-run, appears to be each country's export receipts. In particular, UMOA countries who experienced a decline in the value of exports (relative to the average of the union

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13 In view of the small degree of economic interaction between the member countries, there are no substantial spillover effects of credit creation in one country on demand conditions in the others.

14 This process is documented in Honohan (1990). Other factors can also influence credit growth; the banks' borrowings from correspondents have been an important factor in the past.

15 Alternatively, if one or more country credit ceilings were being exceeded, country-specific reserve requirements could be imposed in those countries to choke off the expansion of credit. This might be the best solution if it were to prevail only for a short while. Sustained use of such devices would serve to recreate a wedge between national credit markets and impede the market allocation of credit.

experience) have tended to obtain a higher share of central bank credit[16]. To this extent, the members have been able to benefit from the risk-pooling afforded by the diversity of export products in the union. However, efficient pooling of these risks requires the available credit to be used as a revolving fund, with borrowings to cover short-term disturbances being repaid in better times.

In fact, not all countries appear to treat central bank credit to the banking system as a revolving fund. Somehow, at least in the UMOA, the larger and more prosperous countries have gained a disproportionate share in the regional distribution of credit. The major shifts in the distribution of credit over the years in favor of these countries have shown no tendency to be reversed. Figure 1 shows lending to banks by the BCEAO expressed as a percentage of wide money. The upper panel of the figure shows the three countries, Cote d'Ivoire, Senegal and Benin, which have received the greatest proportionate share rising to more than 60 per cent of each country's wide money stock; the lower panel show the other three[17], none of whom ever received more than about 40 per cent of wide money (less than 20 per cent for Togo) and whose credit has tended to revert to low levels. Since excessive credit expansions have leaked out through the balance of payments, this skewed distribution of credit has resulted in a skewed pattern of external deficits and external reserves, with the three larger countries holding disproportionately low gross external reserves.

---

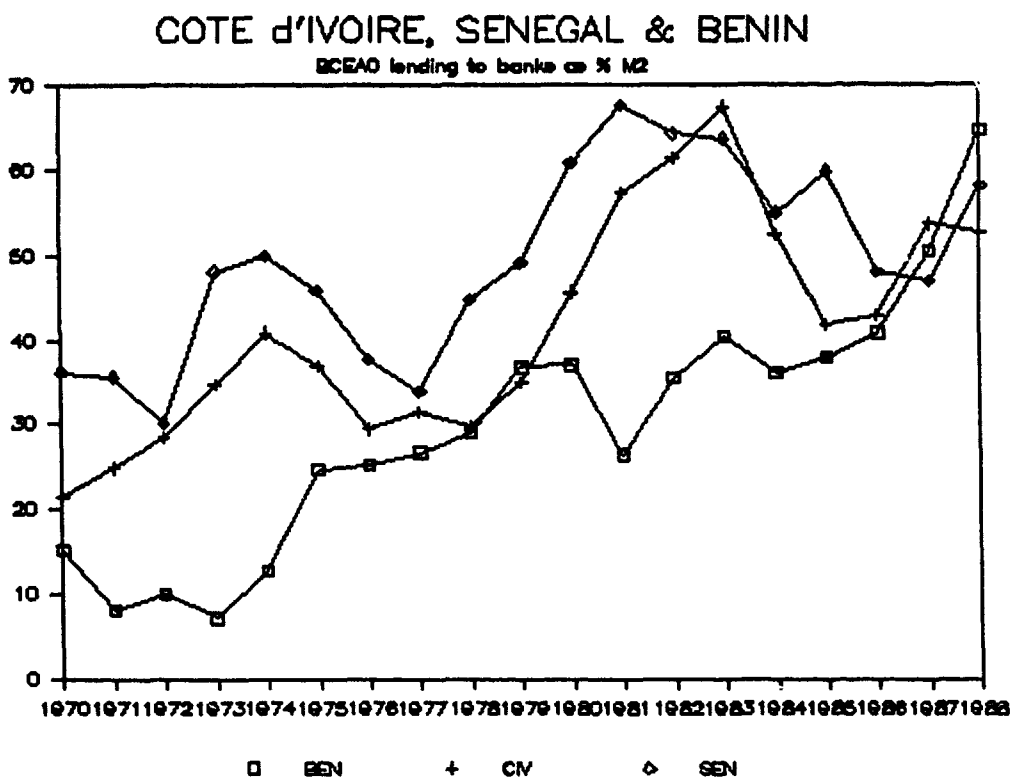
16 Thus in a pooled cross-section and time series of seven UMOA countries for ten years (1978-87), regressing annual changes of each countries' share in monetary authorities claims on banks and government (L) on the fall in its share of exports (X) gives the following equation:

$$L = 0.428\ X \qquad RSQ=0.194 \quad No.\ Obs. = 70.$$
$$(s.e.=0.105)$$

The direction of effect is as predicted, but clearly many other factors play a part in determining the manner in which central bank lending is divided between countries, as the equation explains only twenty per cent of the total variation in the lending series. Since the size of total lending is of the same order of magnitude as total exports, we may say that the increase in lending predicted by the equation is a very substantial fraction of the fall in export receipts. Thus in the short run the monetary mechanism provides a very considerable buffer. Note, however, that the data on monetary authorities' claims on the government includes the counterpart of IMF drawings which are channeled through the central bank and actually provide the largest part of the lending.

17 Mali is not shown; it joined the union in 1984.

FIGURE 1


COTE d'IVOIRE, SENEGAL & BENIN
BCEAO lending to banks as % M2
70
60
50
40
30
20
10
0
1970 1971 1972 1973 1974 1975 1976 1977 1978 1979 1980 1981 1982 1983 1984 1985 1986 1987 1988
BEN
CIV
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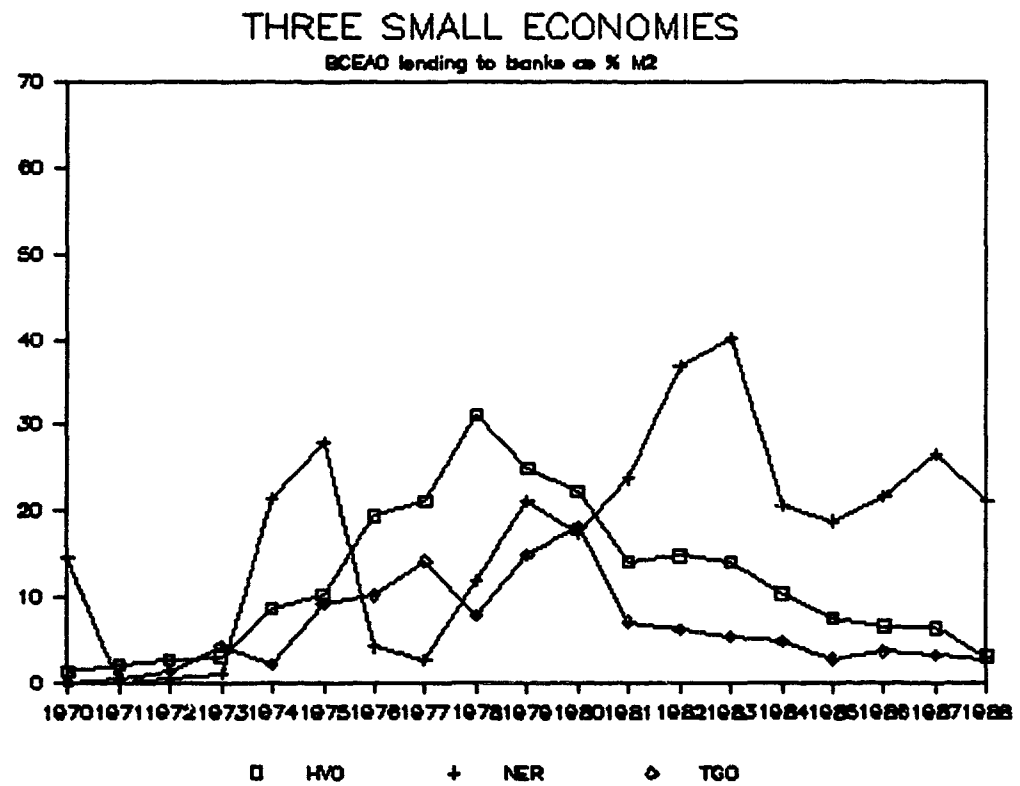
THREE SMALL ECONOMIES
BCEAO lending to banks as % M2
70
60
50
40
30
20
10
0
1970 1971 1972 1973 1974 1975 1976 1977 1978 1979 1980 1981 1982 1983 1984 1985 1986 1987 1988
HVO
NER
TGO

Cote d'Ivoire's share of union GDP has fluctuated between about 40 per cent and 55 per cent in the period 1970-86 (with its share of union population growing from 23 per cent to over 27 per cent). Before 1980 Cote d'Ivoire's share in union external reserves fluctuated between 22 per cent and 62 per cent, but in that year it fell below 7 per cent and has been as low as 1 per cent, it share has never recovered to pre-1980 levels. A similar pattern is noted for Senegal and Benin. Ine fall in these three countries' shares of external reserves was taken up largely by Togo. Although Togo's share of union GDP has been falling from only about 7 per cent to about 5 per cent, and although its share in union external reserves never exceeded 20 per cent before 1980, since 1981 its share in union external reserves has never fallen below 40 per cent.

This dramatic shift in relative shares of the union's gross external reserves corresponds to a disproportionate allocation of central bank credit to Cote d'Ivoire, Senegal and Benin. It is also reflected in the net external assets of the monetary system (figure 2). The excess credit leaked out into the balance of payments resulting effectively in these countries indirectly borrowing from (poorer) Togo to finance imports. This would be unsurprising on a temporary basis, but as it has been sustained for many years it suggests that there is no adequate mechanism for ensuring that the resources of the union are treated as a short-term revolving fund. The forces for repayment are extremely weak[18].

As already suggested, a permanent pattern of persistent borrowers and patient lenders might be justified on the basis of a higher marginal product of capital in the borrowing countries, in which case the lending countries might achieve a better return than if they had increased domestic expenditure. However, the fact that much of the credit has gone to banks which have failed proves that credit has not sought out high-yielding activities. Indeed, the financial return to smaller members in the form of central bank dividends - or seignorage - will have been seriously eroded by these losses. It is to these financial returns that we now turn.

5 The distribution of seignorage.

Membership of a monetary union is not a zero-sum game; some of its benefits, such as those of price stability, are public goods that can be enjoyed by all. The benefits of seignorage are divided among the members. This section explains how seignorage is divided and shows that the division is not as equitable as it may appear at first sight.

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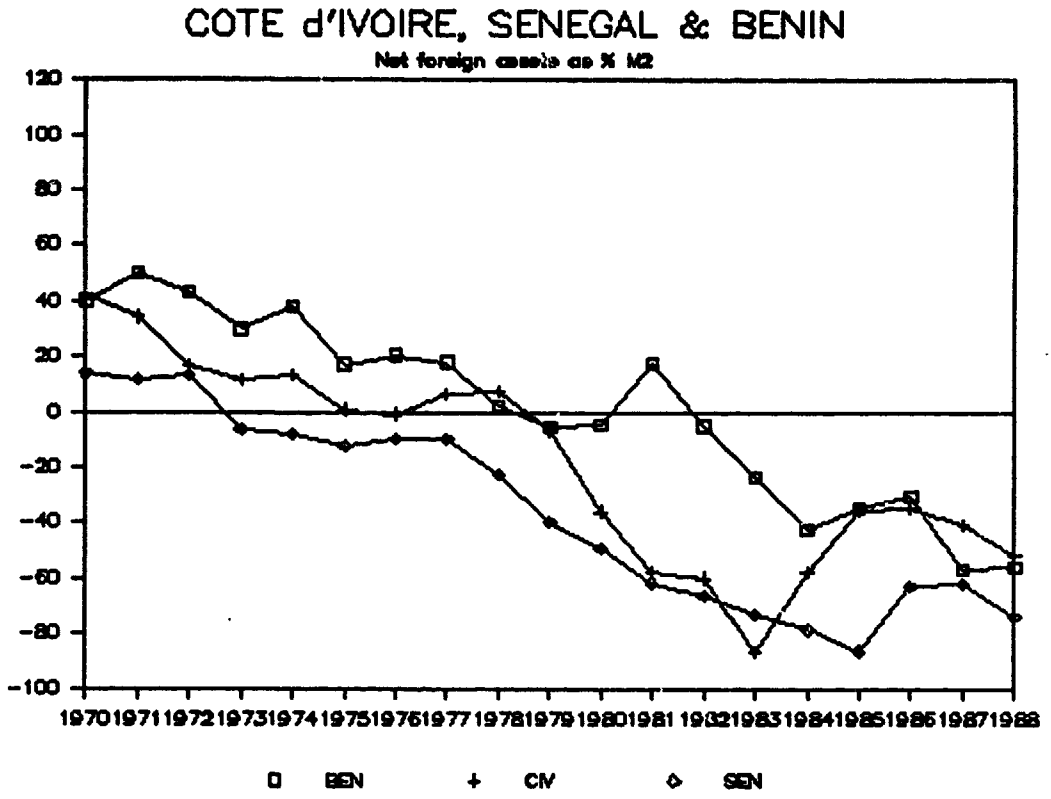
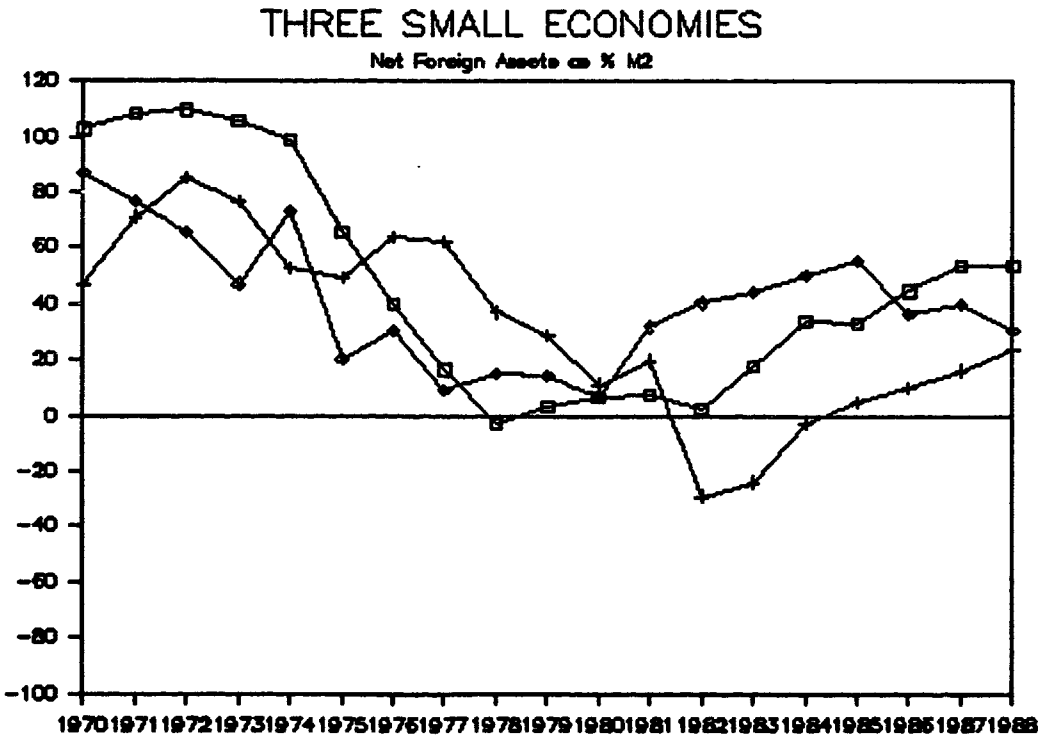
18 In contrast, the union as a whole tends to repay drawings from its overdraft facility at the French Treasury.

FIGURE 2


COTE d'IVOIRE, SENEGAL & BENIN
Net foreign assets as % M2
120
100
80
60
40
20
0
-20
-40
-60
-80
-100
1970 1971 1972 1973 1974 1975 1976 1977 1978 1979 1980 1981 1982 1983 1984 1985 1986 1987 1988
BEN
CIV
SEN


THREE SMALL ECONOMIES
Net Foreign Assets as % M2
120
100
80
60
40
20
0
-20
-40
-60
-80
-100
1970 1971 1972 1973 1974 1975 1976 1977 1978 1979 1980 1981 1982 1983 1984 1985 1986 1987 1988

Broadly speaking, seignorage is the benefit which accrues to the issuer of money by virtue of being able to issue interest-free currency rather than having to incur interest charges on borrowing. The total value of the currency issue in the UMOA is about $2 billion, in the BEAC zone it is about $1.3 billion. Most of the benefit of the seignorage on this currency issue should flow to member governments through the distribution of BEAC profits, but some is transferred to those who are given subsidized credit from the Central bank.

The easiest way to trace the flow of seignorage is to consider the accounts of the central banks. Taking the BCEAO 1986 balance sheet (Table 7) for example it can be seen that currency is the largest single item[19] representing over half of the BCEAO's liabilities. The principal corresponding assets are claims on banks and on the national treasuries, the latter being little more than one-third as important as the former. These claims are interest bearing, while the currency is not. This offers a margin which, after the operating costs of the BCEAO are deducted, represents most of the flow of benefits to member governments arising out of seignorage. The remainder of the seignorage is passed through the implicit interest subsidy on government borrowing and on some of the commercial bank borrowing from the BCEAO[20].

The most natural distribution of seignorage would be in proportion to each member's national currency issue. In accordance with the UMOA statutes, however, the BCEAO's dividend is distributed equally among the member states. Therefore were it not for the subsidy on BCEAO lending rates it would seem that we could say that the seignorage is divided equally among the countries and thus represents a progressive redistribution from the large (and rich) to the small countries)[21]. But there is an important caveat.

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19 Excluding the IMF-related items and the miscellaneous items "comptes d'ordre et divers".

20 There is not enough published information to make a precise calculation of each of the elements in the seignorage. Rough approximations based on 1987 balances and interest rates suggests that about one-third of the flow of UMOA seignorage benefits for that year came through the interest subsidies. For the BEAC the proportion was more like three-fifths.

21 The rough calculations based on 1987 suggest that Cote d'Ivoire could have taken almost 30% of the UMOA seignorage flow and Senegal 16%. In each case the take was not greater than these countries' share (50% and 16%) of total currency in circulation; but it was greater than would be implied by equal distribution (14%). Benin's estimated take (12%) was the third largest, even though it had the lowest share of currency in circulation.

Table 7 : BCEAO BALANCE SHEET
(September 1986)

Assets		
Gold		21
IMF Reserve Position and SDRs		16
Foreign Exchange		135
(of which Operations Account)	(95)	
Claims on Banks and OFIs		596
Claims on National Treasuries		222
Operations on Behalf of National Treasuries		431
(of which IMF and Trust Fund)	(399)	
Fixed Assets, etc.		47
Suspense Accounts and Miscellaneous		341
Total Assets = Total Liabilities		1809
Liabilities		
Currency		528
Claims of Foreign Banks, etc.		57
Claims of Local Banks and OFIs		234
Claims of National Treasuries, etc.		80
Transfers Being Executed		10
Obligations in Foreign Exchange		0
IMF, SDRs and Trust Fund		426
Capital and Reserves		107
Suspense Accounts and Miscellaneous		340

In billions of CFAF; US$1=CFAF 331.

The caveat arises because a large part of the BCEAO's lending to banks has become non-performing. In Benin, Senegal and Cote d'Ivoire in particular, the BCEAO holds especially large claims on insolvent banks. Although it falls to each national government to meet BCEAO claims on insolvent banks, the BCEAO has already decided to consolidate these debts at very concessional rates. As the total of the claims in question are of the same order of magnitude as the currency issue, such concessions will severely dent the flow of seignorage benefits coming through the BCEAO dividends. In fact, by making some very rough calculations on the distribution of seignorage after retrospective account is taken of the annualized cost of these concessions, it appears that close to one hundred per cent of the seignorage of recent years has benefitted Cote d'Ivoire, Senegal and Benin[22].

The full story about who benefits from the seignorage therefore becomes a combination of equal distribution of central bank profits, subsidies on treasury borrowings, and concessions made to individual countries in respect of bank insolvencies[23]. Though the smaller member countries have benefitted over the years by a larger distribution than they would have received had the distribution been proportionate to currency issue, they will now suffer by the equal distribution of losses on the BCEAO's portfolio. In the end it may be that they will effectively lose all of the seignorage.

For the BEAC, the seignorage analysis is more complex. The distribution of BEAC profits is not equal, but depends on a formula designed to take account of the actual contribution of each member country to the profits of the

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22 Adjusting the estimates mentioned in previous footnotes gives these three countries 46%, 26% and 16% respectively. These calculations are very tentative as the scale of the losses is not yet fully determined.

23 The country-by-country assignment of interest charges on the BCEAO's operations account borrowing at the French treasury could also be relevant; but so long as these remain mostly as unpaid book entries between the members and the BCEAO they need not have any importance and are not therefore discussed here.

BEAC[24]. Whatever about the merits of the formula in normal circumstances, it is not clear how it will be applied if it becomes necessary to take account of heavy write-offs on BEAC loans to weak banks. Therefore it is too early to judge the likely distributional impact among countries of such losses.

The overall conclusion must be that the arrangements for distributing seignorage have been vitiated by the failure of the central banks to ensure that the resources mobilized by the currency issue were invested in a sound manner.

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24 Some 70% of the profit distribution is divided on that basis. A further 15% is distributed in proportion to the currency issue and the remainder (15%) is distributed equally among the members. In calculating the contribution of each member country to profits, interest payments to the BEAC from a given country are regarded as part of that country's contribution to profits. Interest earnings from outside the union are allocated in proportion to each member country's external reserves. A detailed critique of the formula and its application is not attempted here, but it is clear that it does not successfully mimic the distribution of seignorage earnings which would prevail if each country operated with an independent currency issue. A rough calculation suggests that the Central African Republic and Chad (both of which have comparatively small borrowings and are among the poorest of the BEAC countries) are the most disadvantaged by the formula.

6 Concluding remarks: the banking crisis

Previous sections have shown that, although the CFA zone has ensured a degree of price stability over the long-run, money and credit policy has not been without problems. The distribution of credit among different member states has not followed market principles but has been determined administratively. While the administrative arrangements are not obviously inequitable in themselves, the UMOA has slid into a very lop-sided situation where three countries - the three most prosperous - have received the bulk of central bank credit and much bank lending in those countries has become non-performing. Between them, banks in these three countries have run up a net capital deficiency approximately equal to the average currency issue for the whole union - a sum not far short of $2 billion or ten per cent of the union GNP for one year. It is as if the central bank had printed the entire currency issue only to hand it to non-performing borrowers in these three countries.

How does it arise that the three countries with the largest bank insolvencies are also the countries which have received the lion's share of central bank credit? It is difficult to avoid the inference that, for all the talk of monetary programming, the inter-country allocation of credit has been driven by pressure to finance what has proved to be unsound lending by the banks in the most influential countries. Perhaps envisaging such an eventuality, the statutes of the union require each national government to make good any claims of the BCEAO on an insolvent bank[25]. Despite this, the governments involved have obtained generous rescheduling terms from the BCEAO and are also hoping for substantial additional concessionary assistance from bilateral and multilateral donors to finance the debts.

If one is to think in terms of winners and losers, so far the winners are those who benefitted from the unwise and un-repaid loans made by the failed banks. The four poor countries of the UMOA are, so far, losers; their claims on future dividends from the BCEAO are compromised by the uncertain value of

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25 This provision may actually have encouraged complacency on the part of the central bank in making loans to unsound or doubtful banks, as it divorced responsibility for losses from the decision to lend and meant that the central bank had no clear incentive to ensure that the banks to which it lent were sound. As a result, the central bank operated bank supervision as if it were a disinterested party, merely reporting its findings to the national authorities and taking no steps directly to curb bad management practices. On the other hand the provision it has certainly not been effective in discouraging governments from arranging for loans to made for political rather than sound economic purposes.

its claims on the failing banks and the three rich governments. The tentative calculation above suggested that these countries have lost seignorage equivalent in capitalized terms to the value of currency in circulation.

Perhaps over-emphasis on the question of maintaining the parity led to preoccupation with macro-economic aggregates, such as the total amount of central bank credit in the system to the neglect of the prudent distribution of this credit, and the adequate management of banks in the union. It is even possible that the device of a statutory ceiling on advances to government (designed to facilitate the credit restraint necessary to assure the exchange rate) provided a false sense of security and led to neglect of the growth of parastatal and government influenced credit.

On any reckoning this is a very poor performance of the union. It leads one to ask whether alternative statutory framework could have led to a more favorable outcome, with the resources of the union being distributed in a genuinely revolving fund to meet fluctuations in external needs of individual countries rather than being systematically channeled to a select few. The establishment of a more effective and market-based mechanism for channeling surplus funds would help: a true "marche monetaire" where solvency of the borrowing institution would be the sole criterion of whether it could have access to funds at a market-clearing rate.

In the BEAC there are also serious problems of bank insolvency, though in this case the evolution of central bank credit has changed sharply in the last couple of years, largely as a result of the fall in oil prices, so that it is too early to speak in terms of long-term structural inequalities between countries in the BEAC zone.

One must fear that the very unequal distribution of economic power of the member countries will still give Cote d'Ivoire, and to a lesser extent Senegal, in the UMOA, and Cameroon in the BEAC, the ability and incentive to continue to benefit disproportionately from the system when it has been recapitalized. Perhaps the power structure of the CFA zone would be more diffuse if the two unions were to merge. The dominance of Cote d'Ivoire would certainly be tempered, and the likelihood of a four-way coalition of the prosperous countries working to the disadvantage of the rest would seem somewhat remote. Each of Cameroon, Gabon, Cote d'Ivoire and Senegal might, in that wider grouping, provide a check on the others.

References.

Austen, R. (1987), African Economic History: Internal Development and External Dependency, London.

Bhatia, R.J. (1985), The West African Monetary Union: An Analytical Review, (Washington, D.C., International Monetary Fund).

Devarajan, S. And J. de Melo (1987), "Evaluating Participation in African Monetary Unions: A Statistical Analysis of the CFA Zones", World Development, Vol 15, No. 4, pp. 483-96.

Devarajan, S. And J. de Melo (1987), "Adjustment with a Fixed Exchange Rate: Cameroon, Cote d'Ivoire and Senegal", The World Bank Economic Review, Vol. 1 No. 3, pp. 447-87.

Dittus, P. (1987), "Structural adjustment in the franc zone - the case of Mali", World Bank CPD Discussion Paper 1987-11.

Guillaumont, P. And S. (1984), Zone franc et developpement africaine, (Paris, Economica).

Guillaumont, P. And S., eds. (1988), Strategies de developpement comparees: zone franc et hors zone franc, (Paris, Economica).

Guillaumont, P., S. Guillaumont and P. Plane (1988), "Participating in African Monetary Unions: An Alternative Evaluation", World Development, Vol 16, No. 5, pp. 569-76.

Honohan, P. (1983), "Measures of Exchange Rate Variability for One Hundred Countries", Applied Economics, Vol. 15, pp. 583-602.

Honohan, P. (1990), "Price and Monetary Convergence in Currency Unions: The Franc and Rand Zones", mimeo.

Krumm, K. (1985), "Adjustment policies in the Ivory Coast in the framework of UMOA", World Bank CPD Discussion paper 1985-6.

Krumm, K. L. (1987), "Adjustment in the franc zone: focus on the real exchange rate", World Bank CPD Discussion Paper 1987-7.

Leite and Makonnen (1986), "Savings in the BCEAO countries", Savings and Development, Vol 10. No. 3, July-September.

Ouattara, A. (1986), "The Balance of Payments Adjustment Process: The Experience of Ivory Coast", World Development.

Yansane, K. (1984?), Controle de l'activite bancaire dans les pays africains de la zone franc.

Yeats, A. (1989), "Do African Countries Pay More For Imports? - Yes", PPR Working Paper 270.

Yeats, A. (1989), "On the accuracy of economic observations: Do Sub-Saharan Trade Statistics Mean Anything?", PPR Working Paper 307.

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